

REMARKS

Claims 1-12 and 14-36 are pending in this application. All of the pending claims are rejected. None of the claims are currently amended. Reconsideration and further examination are respectfully requested.

Claims 1-12 and 14-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sistanizadeh et al.* (U.S. 6,681,232) in view of *Levandovsky et al.* (U.S. Patent Publication 2002/0063915). In the previous response, Applicant pointed out that the claims distinguish *Sistanizadeh* by reciting automated provisioning in an all-optical network such that a path may be set up and torn down quickly, e.g., in seconds rather than weeks or months, without exposing sensitive network topological data to the user. The Office now concedes that *Sistanizadeh* fails to teach provisioning in the optical domain, but asserts that a newly cited reference, *Levandovsky*, teaches this limitation at paragraphs 0015-0017. Applicant respectfully traverses. *Levandovsky* describes a method for validating a path through a switched network. In paragraph 0015 *Levandovsky* specifically characterizes the nodes being utilized by the path validation unit as including “OEO transducers that are used to regenerate an optical signal in electrical domain and, subsequently, convert it back to an optical signal that may be transmitted to the next device.” Because the OEO (optical-electrical-optical) node converts the signal to the electrical domain, *Levandovsky* fails to teach provisioning in the optical domain, i.e., in an optical network where data is processed and transported only in optical form. At paragraph 0016 *Levandovsky* specifically states that the path validation unit “checks a proposed path route through a network to determine whether an optical signal through the path might be provided with sufficient quality of service.” In particular, the checking is based on bit error rate in the proposed path. However, there is no teaching in paragraph 0016 or elsewhere that the path validation unit provisions a new

path. Path validation is not equivalent to path provisioning. Therefore, *Levandovsky* fails to teach provisioning. Paragraph 0017 describes how the path validation unit may be implemented in a central connection controller. It is unclear to Applicant what teaching in paragraph 0017 is asserted to be relevant to provisioning in an all-optical network.

As already written in the previous response, *Sistanizadeh* describes a network in which transport links might be optical, but in which the nodes are electrical. *Sistanizadeh* states that IP-over Ethernet on fibre network is supported.¹ The use of IP implies routing, a protocol which cannot be executed in the optical domain because there is no practical technique for optically buffering packets while table lookups are performed. Therefore, *Sistanizadeh* fails to teach provisioning in an optical network where data is processed and transported only in optical form.

In view of the above, the presently claimed invention distinguishes the cited combination by reciting a technique for automatically provisioning in an all-optical network without exposing sensitive network topological data to the user. For example, claim 1 distinguishes the cited combination by reciting “an optical service agent including: a user-to-network interface (UNI) for interfacing with an optical communication network **in which data is processed and transported only in optical form** ... optical service logic for interacting with the optical communication network via the UNI ... for providing said bandwidth management services for the user, including provision of a new optical communication path between specified nodes in the optical communication network.” (emphasis added) Similarly, claim 12 distinguishes the cited combination by reciting “a user application requiring communication services from an optical communication network in which data is processed and transported only in optical form; and an optical service agent for communicating with the optical communication network and providing optical communication network bandwidth management services for the user

application, including provision of a new optical communication path between specified nodes in the optical communication network.” Claim 24 distinguishes the cited combination by reciting “an optical communication network in which data is processed and transported only in optical form; ... wherein the first network user comprises an optical service agent for obtaining optical communication services from the optical communication network via a user-to-network interface (UNI) communicating with the optical communication network ... including provision of a new optical communication path between specified nodes in the optical communication network.”

Claim 31 distinguishes the cited combination by reciting “obtaining additional bandwidth by an optical service agent in the user for a connection in the optical communication system, including provision of a new optical communication path between specified nodes in the optical communication system; relinquishing unused bandwidth by an optical service agent in the user for a connection in the optical communication system; and allocating bandwidth by an optical service agent among multiple connections in the optical communication system, prior to which an optical service server executes the following steps: authenticating the user; obtaining network topological information; and employing the network topological information on behalf of the optical service agent to provide bandwidth management services such that the network topological information is not exposed to the first network user.” Claims 2-11, 13-23, 25-30, 32-36 are dependent claims which further distinguish the invention, and which are allowable for the same reasons as their respective base claims. Withdrawal of the rejections of claims 1-36 is therefore requested.

¹ See, e.g., Abstract

Should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone the undersigned, Applicants' Attorney at 978-264-4001 so that such issues may be resolved as expeditiously as possible. For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

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